



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,989	12/08/2005	Nobuhiro Hasegawa	5404/127	6554
757 7590 04/07/2008 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610				
EXAMINER				
ZIMMER, MARC S				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
04/07/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/559,989

**Applicant(s)**

HASEGAWA ET AL.

**Examiner**

MARC S. ZIMMER

**Art Unit**

1796

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-14 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Claims 1, 3-7, and 15 had been individually rejected over Nakayama et al. and Kodera et al. Applicant has amended claim 1 so as to recite specific embodiments of the component having  $\alpha$ ,  $\beta$  or  $\alpha,\gamma$ -diol structure and, further, to require that the vinyl polymer has specific molecular weight distribution and, thereby, overcome the rejections. However, the Examiner discovered a new foundation for rejection in the course of carrying out an updated/modified search.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yano et al., U.S. Patent # 6,077,896 in view of Nakagawa et al., U.S. Patent Application Publication No. 2002/0137841. Yano teaches a composition (abstract) that, in its most fundamental embodiment, comprises a silane-derivatized polyether and a compound having having  $\alpha$ ,  $\beta$  or  $\alpha,\gamma$ -diol structure of which the instantly claimed compounds are exemplary (column 4). Relevant to the present discussion, the added incorporation of a vinyl polymer bearing silyl groups is contemplated in column 3, lines 63-67. Suitable vinyl polymers are identified as those that are originally disclosed in the three Japanese patent documents identified in column 4, lines 1-5. A quick review of these documents verifies that they teach vinyl polymers equivalent to those mentioned in claims 4-7. However, it is not clear that these polymers adhere to the

polydispersity limitation now set out in the claims and, in fact, the vinyl polymers taught in the older two references almost certainly wouldn't adhere to this limitation given that living free radical polymerization techniques weren't developed until later.

It is notable, on the other hand, that the compositions disclosed by Yano are to be used as construction sealants (column 7, lines 3-5) because Nakagawa says that the employment of polymers having a broad molecular weight distribution as sealant materials is problematic for the reason outlined in paragraph [0012]. Nakagawa goes on to describe the preparation of vinyl polymers having a low polydispersity that exploits the same synthetic approach that is used by Applicant, i.e. atom transfer free radical polymerization. See paragraphs [0043] and [0044]. It is, therefore, the position of the Examiner that it would have been obvious to one having ordinary skill in the art to replace the polymers taken in the preparation of the vinyl polymers mentioned with ones that are similarly-constituted but have been made by the synthetic approach disclosed in Nakagawa to yield polymers having a narrow polydispersity so as to improve the viscosity properties of the resulting composition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC S. ZIMMER whose telephone number is (571)272-1096. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 28, 2008

/Marc S. Zimmer/  
Primary Examiner, Art Unit 1796